



NAVAL SAFETY CENTER

MISHAP REDUCTION C A M P A I G N

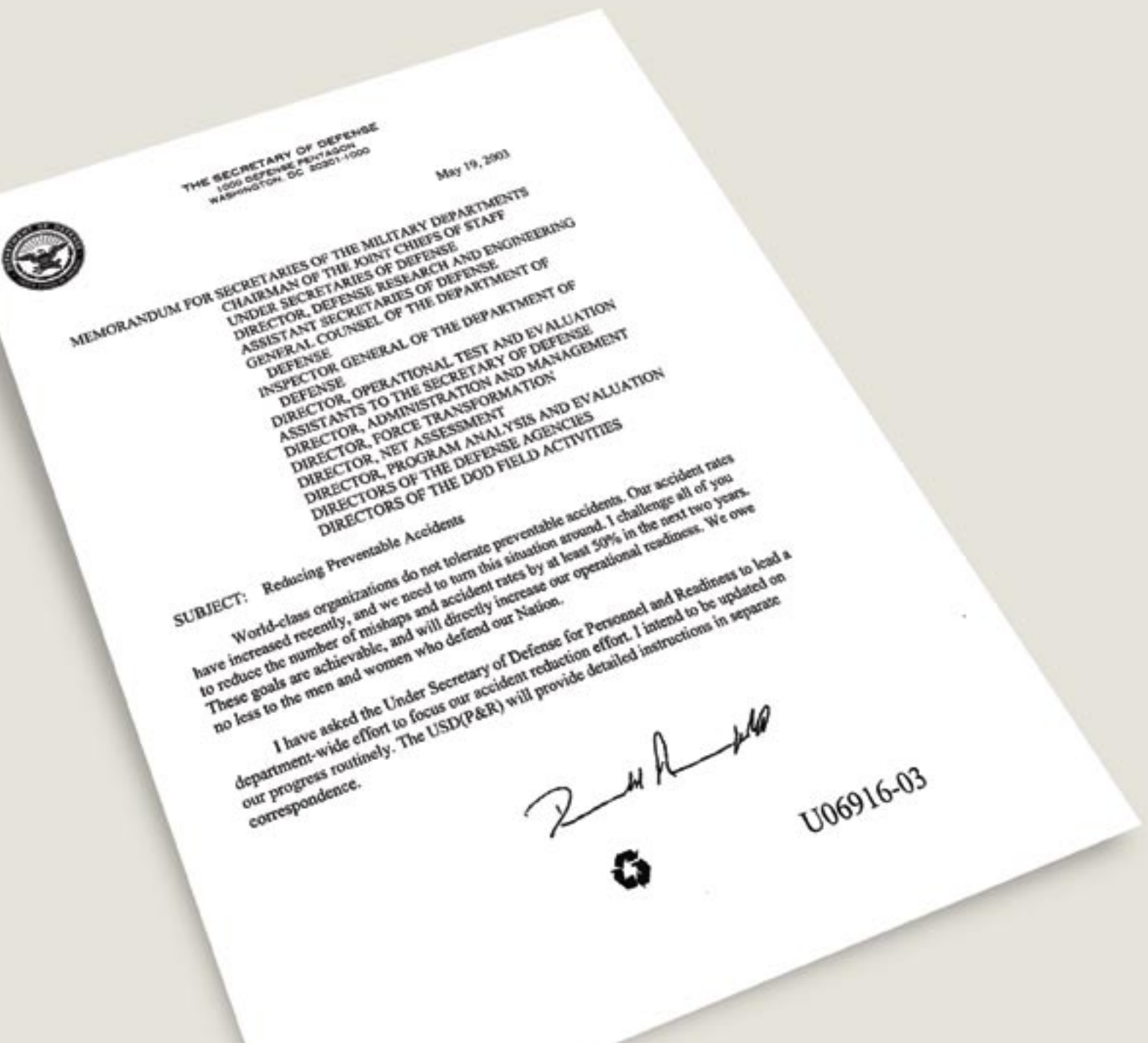
2000 STATUS REPORT

Traffic
Shore
Recreation
Aviation
Afloat

The Challenge

“Reduce the number of mishaps and accident rates by at least 50% in the next two years. We owe no less to the men and women who defend our Nation.”

—SECDEF, May 2003





Defense Secretary Rumsfeld has challenged the uniformed services to reduce mishaps by 50 percent across the board. While the Navy and Marine Corps team has made progress, much remains to be done to meet the goal.

Numbers are important as we need them to track results, but the substance of our efforts is to reduce and eventually eliminate mishaps. Of particular concern are private motor vehicle and off-duty recreational mishaps. These two areas continue to remain static or spike during summer and holiday seasons. Our deckplate Sailors and field Marines must become more aware of the potential hazards they face each time they get into a motor vehicle or participate in outdoor recreational activities.

While we at the Naval Safety Center have an abundance of information on our website, analyze data, reach out to the fleet with surveys, and publish numerous magazines and posters dealing exclusively with safety, it will take all our efforts to initiate a change in the safety mindset of our Sailors and Marines. Leadership from top to bottom and bottom to top will make the difference. Each of us bears responsibility for using safety best practices, including wearing prescribed safety clothing and other personal protective equipment (PPE), and reporting discrepancies we witness or improvements we think can be made to help us work and play safely. Safety is an all-hands effort, and those who feel they can rely on someone else to worry about safety are not engaged fully.

At the halfway point in our mishap-reduction efforts, let me re-emphasize that we must all do our part in promoting safety, as well as living, eating and breathing it. Working and playing safely is up to all of us. Mishaps resulting from unsafe practices are tragic and unacceptable. Aside from the human toll they exact, these losses also threaten combat readiness and, as such, our national security.

I implore each of you from Seaman to Admiral, from Private to General, to look out for one another and to think about safety before you undertake any endeavor, no matter how seemingly simple it might appear. Most times, safety and common sense go hand-in-hand—you cannot have one without the other. In all situations, use risk management and weigh the dangers and potential consequences of what you are about to do.

Safety is not something you should practice; rather, it is something you should live every moment.

A large, stylized handwritten signature in black ink, which appears to read "RDB". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

RADM Dick Brooks
Commander, Naval Safety Center

Aviation



The aviation directorate promotes, monitors and evaluates the naval aviation safety program. Staff members assist aviation units with mishap investigations, safety surveys, and culture workshops; analyze mishap trends, causal factors, and proposed corrective actions; develop reporting procedures; and maintain liaison with fleet, shore and staff activities.

Until about 10 years ago, aviation-mishap rates declined dramatically as improvements in training, aircraft, and procedures were introduced. But, recently, the mishap rates have leveled off, and the challenge now is to break through the plateau and reduce the rate by half. FY04 saw, for the first time, the cost of aviation mishaps exceed \$1 billion. In FY04, we lost 19 aircrew and 27 aircraft.

Most of the mishaps have a human-factors component.

At least 27 of 30 mishaps (several still are under investigation) involved human error. We had 11 probable controlled flight into terrain (CFIT) mishaps (several probably from physi-

ological episodes), three midair mishaps, and six runway incidents. While the Navy Class-A mishap rate was 1.13; the Marine Corps rate was 5.25. The graph indicates where we are and the goals.

Programs such as operational risk management, crew resource management, and human-factor analysis focus on performance. Additionally, many units have taken advantage of our culture workshops (78 completed) and safety surveys (110 completed). Each of these programs focuses on reduction of mishaps through reduction of human errors for aircrew and maintainers.

The Navy and Marine Corps has the Aviation Safety Improvements Task Force (ASITF), under the Defense Safety Oversight Council (DSOC), to assist in finding common intervention strategies across the services to aid in mishap reduction. The Aviation Safety Committee works toward continual safety improvement and has developed the ORM and fundamentals campaigns.

Trends

- Human error is still the leading cause of mishaps.
- Mechanical problems are on the increase.
- Fewer violations occur, but there is a higher percentage of skill-based errors and poor crew coordination.
- Emphasis in the fleet is on tactics—it must also be on basic flying skills.
- Word still hasn't circulated fully on the mandated 50-percent reduction campaign.

Mishap Investigations

- Human error (aircrew): leading causal factor
- Skill-based errors
- CRM failures
- Violations
- Inexperience

Takeaways

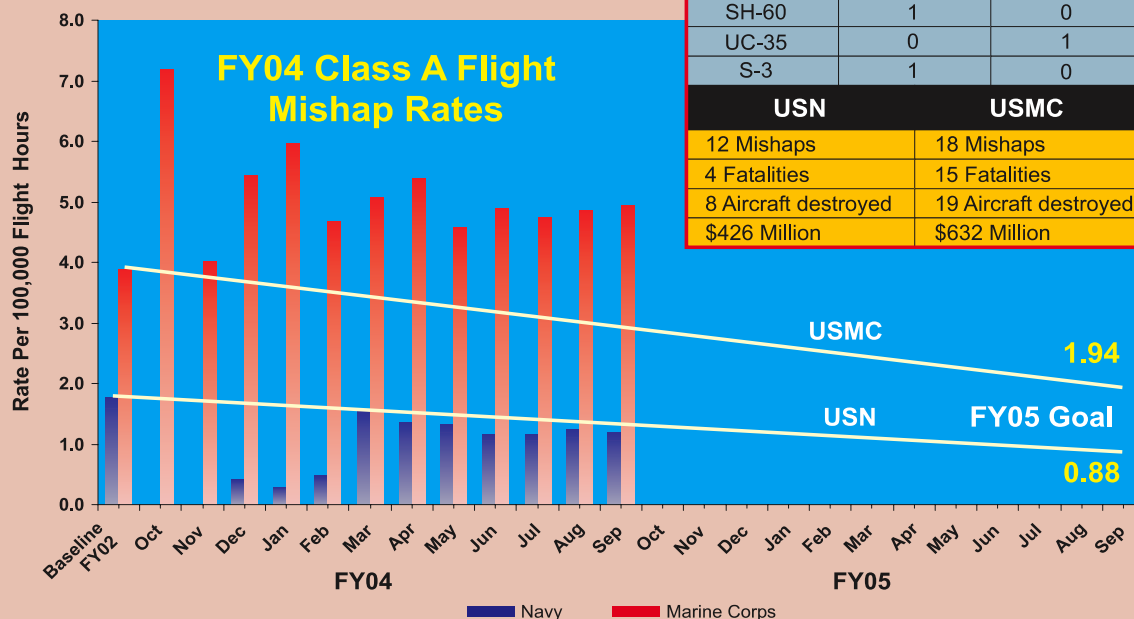
- Safety awareness is driven from the top down, but it's an all-hands effort (bulk of savings will come from preventing mishaps among inexperienced personnel).
- There are challenges to keeping aircrew proficient in basic skills as well as tactics.
- Squadron culture is the driving force behind decreased violations (disregard of procedures will not be tolerated).
- ORM is not just for high-risk evolutions. It needs to be incorporated into everyday events.

Safety Surveys Reveal

- Manning/inexperience occur during large turnovers.
- Incorrect and/or poor training fosters preventable errors.
- Maintenance procedures and aircraft availability are affected by optempo and reduced safeguards.

Leading Causal Factors

- **Human Error (89%)**
 - Aircrew (breakdown in Crew Resource Management, poor decision making, failure to properly perform emergency procedures)
 - Supervisory (failure to provide adequate guidance and training)
- **Material/Systems Malfunction (11%)**
 - Material/component catastrophic failure (no human error involved)



Mishaps	USN	USMC
F/A-18	7	7
AH-1W	0	2
T-45	2	0
AV-8B	0	2
UH-1	0	2
CH-53D/E	0	3
CH-46	0	1
F-14	1	0
SH-60	1	0
UC-35	0	1
S-3	1	0
USN		USMC
12 Mishaps		18 Mishaps
4 Fatalities		15 Fatalities
8 Aircraft destroyed		19 Aircraft destroyed
\$426 Million		\$632 Million

Afloat

The afloat directorate assists ships, submarines and diving commands with the safety requirements and assessment of damage control, engineering, deck, combat systems, weapons, auxiliaries, Navy occupational safety and health, safety administration, and dive lockers. The staff provides ORM refresher training and PMV presentations, analyzes recurring safety discrepancies, conducts safety surveys, and provides commands with an advisor to mishap investigations.

In FY04, the Navy had seven Class-A afloat mishaps, with three lives lost and a total cost of \$20.8 million. These mishaps involved CV, SSN and LCAC platforms, as well as a diving-ops incident.

Efforts have focused on PMV safety, ASCAS (afloat safety climate assessment survey) improvements, development of afloat culture workshops, completion of on-site surveys, incorporation of ORM training, and command involvement. Afloat safety training has been incorporated into the Fleet Readiness Training Plan (FRTTP); intrusive leadership and command excellence programs also are being emphasized. Submarine force units receive ORM immersion training.

The afloat community's challenges for FY05 include:

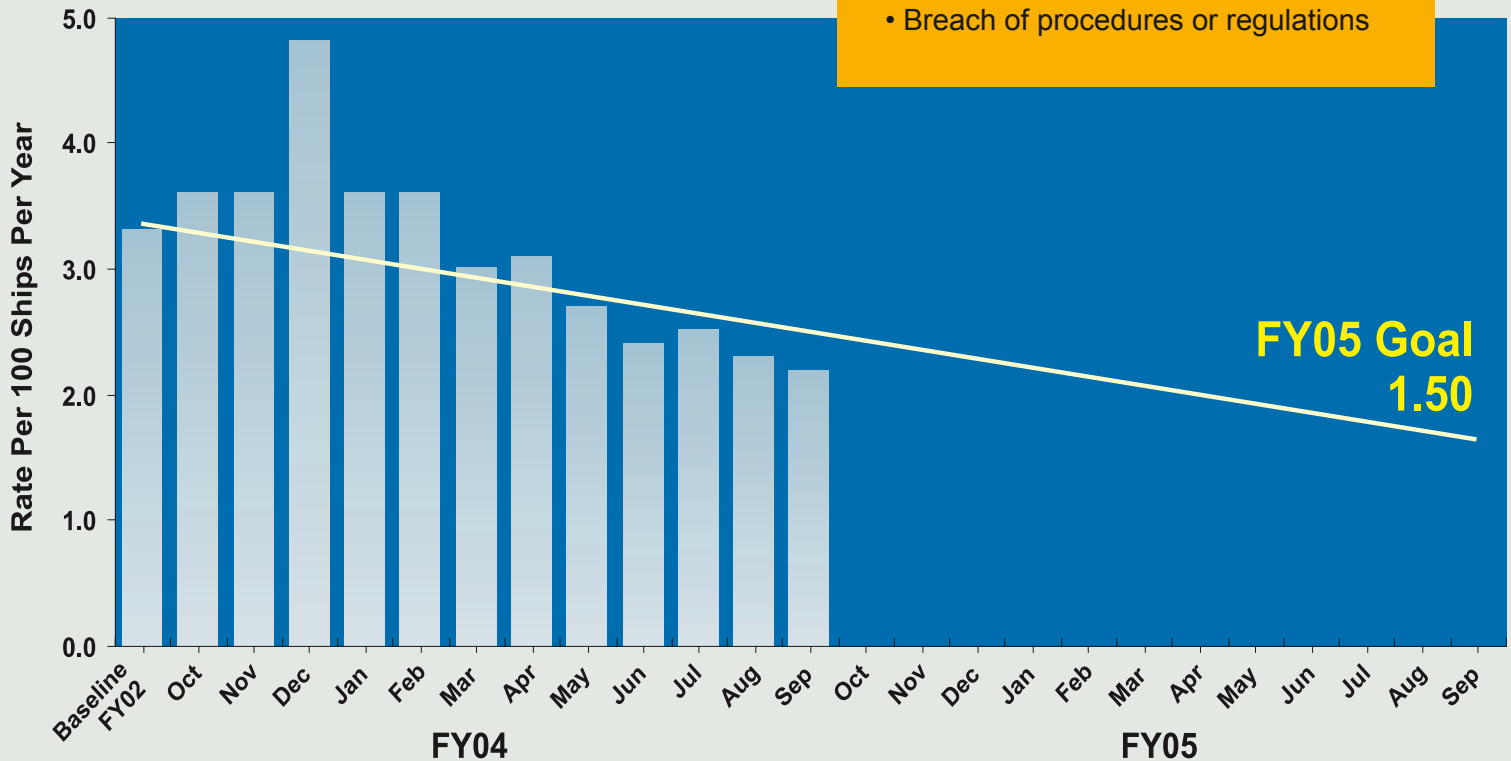
- Reduction of off-duty fatalities; ORM must be "pushed" to reduce off-duty mishaps.
- Team with Commander, Naval Installations (CNI) to improve PMV training.
- Focus on fatal factors and intrusive leadership.
- Improve metrics and work toward achieving FY05 goals.
- Implement Afloat Safety Cultural Workshops, leveraging off the aviation community.



FY04 Afloat Class A Mishap Rates

Top Causal Factors

- Inadequate Supervision
 - Failure to correct problem
 - Planned inappropriate act
- Unsafe acts
 - Loss of situational awareness
- Breach of procedures or regulations



- Support 75-percent mishap reduction through FY08.

The No. 1 area of concern continues to be PMV safety. Future education initiatives include supporting CNI traffic-safety programs, improving availability of motorcycle-safety training, requiring PREVENT (Navy’s alcohol and drug prevention class) for junior Sailors, continuing highway patrol training for all units returning from deployment, and improving online availability of the “Driving for Life” training at Navy Knowledge Online (NKO).



Shore

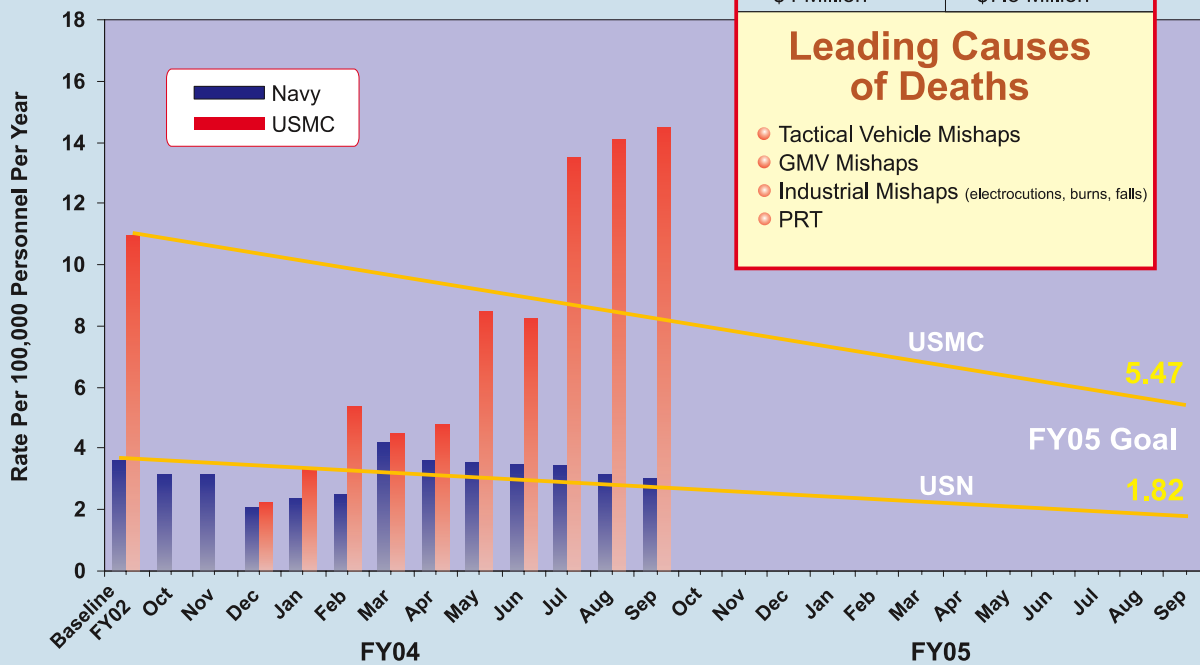
The shore directorate provides guidance, support and assistance to shore installations. In addition to managerial responsibility for the Navy's traffic-safety programs, off-duty and recreation programs, and DoD fire-incident reporting system, this department satisfies requirements for explosive and weapons systems, as well as high-risk training safety issues for the Navy. The tactical-operations division supports Marine Corps ground-safety

programs and provides certified investigators for all shore-associated Class-A mishaps.

In FY04, the Navy lost 94 Sailors to shore-related mishaps, and the Marine Corps lost 57 Marines. Of these fatalities, 73 Navy lives were lost in motor-vehicle mishaps and 21 to off-duty recreational mishaps. The Marine Corps lost 46 Marines to motor-vehicle mishaps and 11 to off-duty recreational mishaps. The following primary factors continue causing most motor-



Operational Shore/Ground Mishap Fatality Rates



vehicle fatalities:

- driving under the influence
- excessive speed
- not wearing a seatbelt or using PPE
- losing control of vehicle

The following factors have been cited as common to off-duty recreational mishaps:

- 43 percent of the victims were between 18 and 22 years old.
- 43 percent of fatal mishaps involved alcohol use.
- 19 percent of fatalities occurred while riding ATVs/off-road motorcycles.
- 14 percent of fatalities were due to drowning.

Many programs have been effective in educating Sailors, Marines and communities to help reduce these mishaps. We have partnered with many organizations in our efforts:

- **Click It or Ticket** - National campaign to promote seatbelt usage.
- **None for the Road** - Virginia ABC

Department-sponsored program to fight drunk driving.

- **You Drink, You Drive, You Lose** - National Highway Traffic Safety Administration initiative.

- **One Drink Too Many** - shows the costs involved with a DUI conviction (posted on NAVSAFECEN website).

- **7/10 of a Second Campaign** - shows mechanics involved in a vehicle crash (also on NAVSAFECEN website).

- **"Heaven Can Wait" Video** - strong video message promoting seatbelt usage.

- **Good Samaritan Campaign** - promotes community and business involvement to reduce off-duty mishaps.

The major challenge we face is to continue educating Navy and Marine Corps personnel and to provide them with the necessary tools to prevent their becoming mishap victims. In the coming year, we are aggressively pursuing the use of mass media: development and distribu-



tion of educational videos, radio and TV commercials, public service announcements, and publications.

Partnerships with public and private agencies promoting safety have proven to be an excellent method to reach a greater percentage of the population. NAVSAFECEN plans to continue to seek new partnerships and to foster partnerships already in place. We also plan to work closely with our sponsors. The Motorcycle Safety Foundation, NHTSA, National Safety Council, and MADD have joined with the Navy in our fight to educate Sailors and Marines and to save lives.

What Leaders Can Do

- Practice intrusive leadership (know the where, what, and how concerning your people).
- Be alert to warning signs for potential situations that may lead to alcohol abuse.
- Talk to your people before liberty call about the importance of not becoming a statistic.
- Ensure your people realize their importance to the unit's mission.
- Provide alternatives and educate personnel on available programs to prevent alcohol abuse, while promoting responsible, safe behavior.
- Provide adequate training, especially for motorcyclists.

Top Causal Factors

When

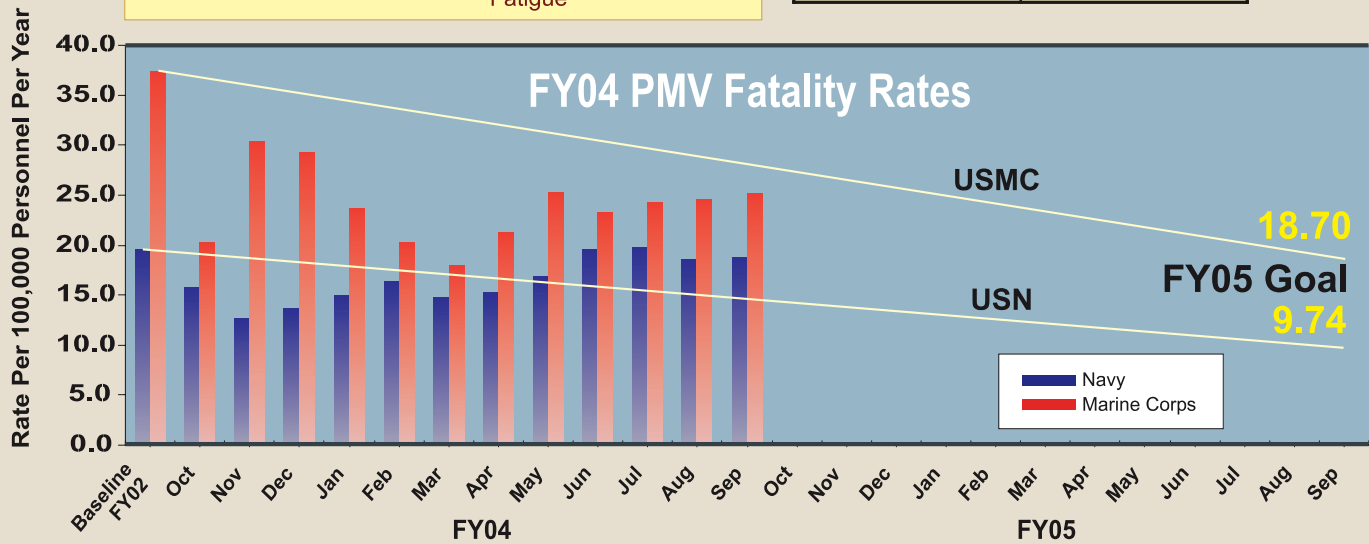
Nighttime Driving
Weekends

Why

No Seatbelt Use
Excessive Speed
Alcohol
Fatigue

USN/USMC Losses

USN	USMC
73 Fatalities	46 Fatalities
\$12.9 Million	\$11.1 Million

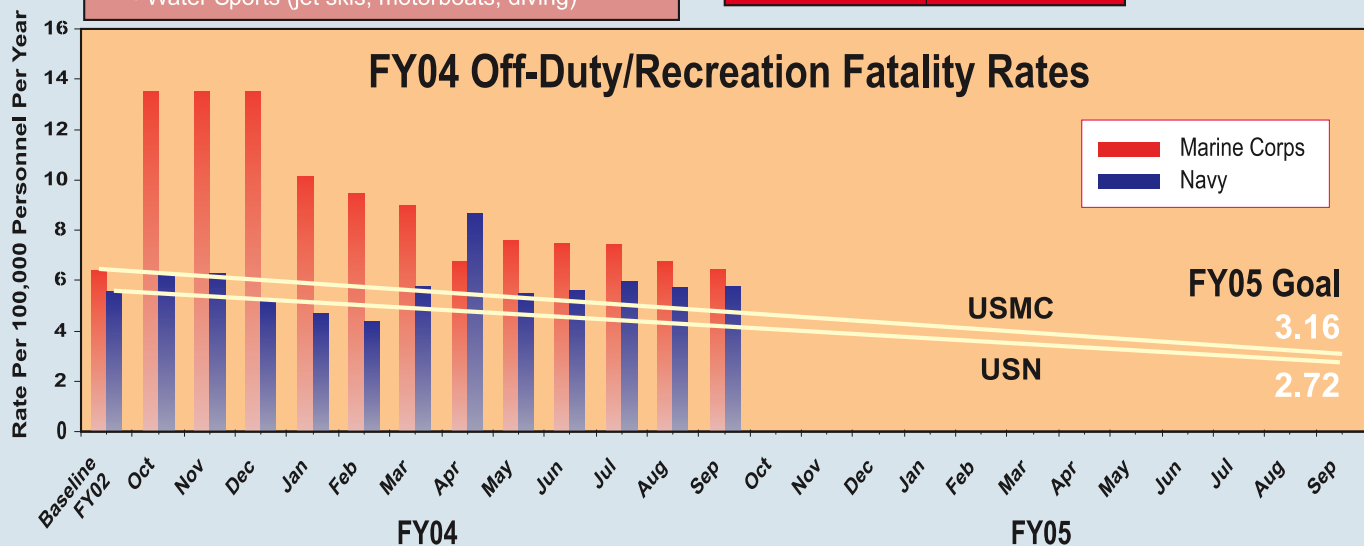


Leading Causes of Deaths & Injuries

- Drowning
- Falls
- Outdoor Recreation
- Team and Outdoor Sports
- Water Sports (jet skis, motorboats, diving)

USN/USMC Losses

USN	USMC
21 Fatalities	11 Fatalities
\$6.1 Million	\$2.9 Million



Traffic Safety–Common Problems

- No traffic-safety coordinator
- No motorcycle, AAA-DIP and/or EVOC training
- No seatbelt program
- Mishap reporting deficiencies
- No prohibition on GMV operation when license suspended or DUI/DWI
- Personnel riding in cargo areas of vehicles
- Traffic devices/signs/roadway markings don't meet federal highway specifications

Traffic Safety–What You Can Do

- Leave-chit statement
- PMV status board
- Designated driver/command transport
- Pre-trip checklist/brief/counseling
- Calling card for emergencies
- CO's PMV policy
- PMV safety quiz
- Safety stand-downs/seminars
- Pre-holiday briefs
- Newcomer orientation/indoctrination
- Leave/liberty request
- Crash-prevention awards program

Off-Duty Recreation Mishaps–Common Problems

- No designated off-duty/recreation manager
- No records of hazard-awareness training
- No record of specific hazard training for hobby-shop equipment or small boats
- Poor maintenance of playing fields

- No PPE for cycling, skating, racquetball
- Insufficient cushioning under playground equipment for fall protection
- Missing guards in woodworking shops
- No inspections of bleachers/grandstands
- Electrical: unlabeled circuits, blocked panel boxes, ungrounded cords, GFCIs

Off-Duty Recreation Safety–What You Can Do

- Recreation and off-duty safety managers, MWR safety coordinator and MWR facility managers should use ORM principles for all activities.
- Use NAVSAFECEN checklists during MWR inspections.
- Conduct pre-holiday stand-downs.
- Provide commands annual assessments (safety and health evaluations).
- Brief personnel visiting foreign ports or returning from deployments, or when newly assigned.
- Provide quarterly hazard-awareness training.
- Perform frequent inspections of hazardous activities, such as swimming pools, automotive and woodworking hobby shops, and athletic fields and playgrounds.
- Perform preventive maintenance for gas furnaces and appliances in military family housing.
- Use the individual off-duty risk assessment form to evaluate your personnel. The form is online at: www.safetycenter.navy.mil/ashore/articles/recreation/iraform.htm
- Tell your supervisor when you see a shipmate abuse alcohol.



Occupational Safety and Health

The Occupational Safety and Health directorate provides policy, guidance, support, and assistance to shore installations and afloat units. In addition to managerial responsibility for the Navy's Occupational Safety and Health Program, this directorate tracks lost work time, worker's compensation issues, and industrial safety for the Navy. The directorate also provides Marine Corps OSH support for ground-safety programs and provides occupational health and industrial hygiene technical assistance.

In FY04, the Navy's civilian lost-workday rate was 34.81 continuation of pay (COP) and leave without pay (LWOP) days per 200,000 work hours because of work-related injuries; this rate is lower than the FY02 level of 39.83. The Marine Corps rate was 55.85; this rate was significantly lower than the FY02 rate of 78.83. Lost workday rates were reduced by strict preventive efforts, which focused on mishap types, and by direct management of lost work-time cases to properly document status and get employees back to work as soon as feasible.

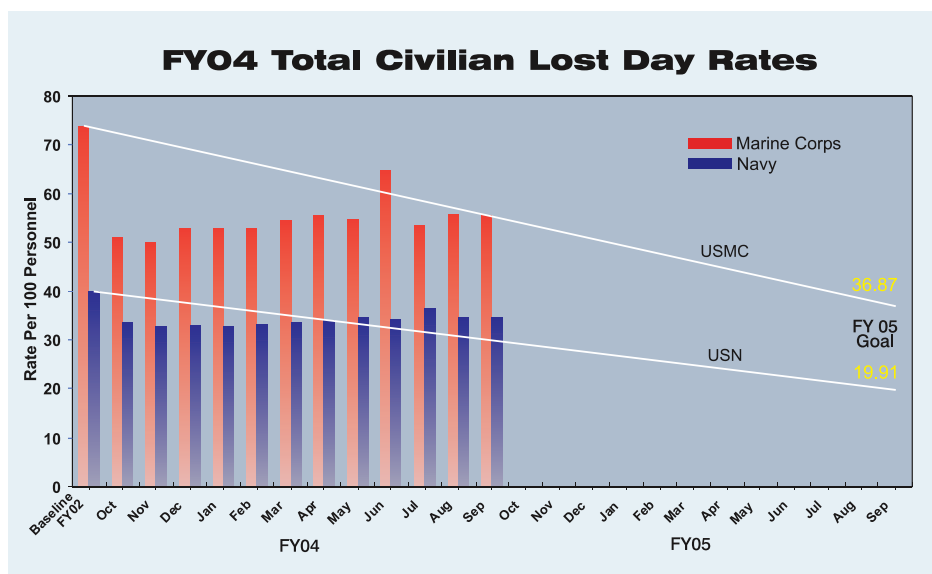
Lost workdays equate to lost production and increased compensation costs. A review of individual mishap reports submitted to the Naval Safety Center

reveals that 40 percent of reported civilian mishaps involving one or more lost workdays occurred because of slips, trips, falls, or overexertion. A number of NSC initiatives to develop and publish fall-protection guidance and require fall-protection programs are directed at these types of mishaps.

A significant initiative to reduce OSH injuries and illnesses has been to document these mishaps by upgrading record-keeping practices. Work-related injuries and illnesses now are captured electronically in the NSC Web-Enabled Safety System (WESS). This system also captures military lost work time, previously not recordable if it involved less than five lost workdays. Causes and details are recorded in WESS and are retrievable by safety managers, who use that information to prevent mishaps.

As part of that upgrade in record keeping, NSC has developed new Navy and Marine Corps joint mishap investigation, reporting and record-keeping policies. These policies comply with the Federal 29 CFR 1904 Reporting and Recording of Occupational Injuries and Illnesses. This compliance accommodates the various shore installations and shipyards that have adopted the Voluntary Protection Program (VPP) standards as their mishap-reduction plan.

In FY05, NSC will expand their involvement with shore installations and industrial activities to better serve shore-safety customers, and look for opportunities to provide guidance and assistance to shore civilian and military safety efforts.



YOUR ONE-STOP SAFETY SHOP

Naval Safety Center

The Naval Safety Center website (www.safetycenter.navy.mil) contains more than 15,000 pages of useful safety information. Our goal is to provide you with the tools you need to help prevent mishaps. You might be overwhelmed by the abundance of information on your first visit, so here are a few suggestions on where to start your tour.



50% Mishap-Reduction Campaign - Navy and Marine Corps commands are working hard to comply with the Secretary of Defense's challenge to reduce mishaps by 50%. This page guides you to news, policy, tools, and data.
www.safetycenter.navy.mil/MishapReduction

SafeTips - You'll find simple safety tips for all types of things from A to Z. You can print and post 'em on bulletin boards or hand them out at meetings.
www.safetycenter.navy.mil/safetips



Safetyline eNewsletter - This bi-weekly newsletter contains timely information to keep you current on safety news, as well as items you can use in safety briefings. Special issues will help you prepare for upcoming holidays.
www.safetycenter.navy.mil/safetyline
Sign-up at: www.safetycenter.navy.mil/list/subscribe-safetyline



Operational Risk Management - A simple, five-step process for identifying and controlling hazards. Its purpose is to minimize risks to an acceptable level. Learn what ORM can do for you!
www.safetycenter.navy.mil/orm

Statistics - Find out current mishap rates, predictions, summaries, and more. Updated several times a week, these statistics provide the best information on mishap statistics available on the web.
www.safetycenter.navy.mil/statistics

Web-Enabled Safety System (WESS)

The Web-Enabled Safety System (WESS) is the Naval Safety Center's online reporting and data-retrieval system. The non-aviation system is online and ready for data entry. WESS for aviation hazard and mishap reporting soon will be available.
www.safetycenter.navy.mil/wess



Traffic-Safety Toolbox

The Traffic-Safety Toolbox is available to help educate and protect Sailors and Marines in your command. Toolbox resources include information on drinking and driving, trip planning, programs and policy, how to conduct a stand down, and much more.
www.safetycenter.navy.mil/ashore/motorvehicle/toolbox

Assessment and Challenges

Where We Are, and Where We Need to Go

Excellent safety programs exist in all communities and at all levels. These programs have produced some good results. But servicewide, the status quo isn't getting the job done in many areas.

The 50% mishap-reduction campaign message hasn't consistently reached the deckplates. As a result, the personnel who are having the mishaps may not be sufficiently focused on preventing them.

Leaders must be engaged at all levels. Accountability for their safety programs and for the safety awareness and safety performance of their subordinates is critical. Most mishaps can be prevented with appropriate intrusive leadership and involvement at every level.

Commands must strive to become proactive and predictive to prevent mishaps, rather than reacting to them after they happen. Every command should have a safety professional integrated into the organization. Fleet units must use the available safety resources, such as the Naval Safety Center's Traffic-Safety Toolbox, the Army's on-line traffic-safety risk-management tool (ASMIS), and leave/liberty risk assessments.

At all levels, we must consistently emphasize safety and risk management as a 24-7 way of life. We must all work with our young Sailors and Marines (especially those under age 27) to be more responsible when they are on leave or liberty.

Safety and risk management must be ingrained into all levels of policy.

During the year ahead, two focus areas are clear. First is the leading cause: human error. Second is the most costly mishaps: aviation (dollar loss), traffic (deaths) and off-duty/recreation (injuries).

The long-term goal is a servicewide cultural change, a sweeping alteration in attitudes and behaviors. With this change, mishaps will not be seen as the cost of doing business, unavoidable, or a permanent part of the landscape.



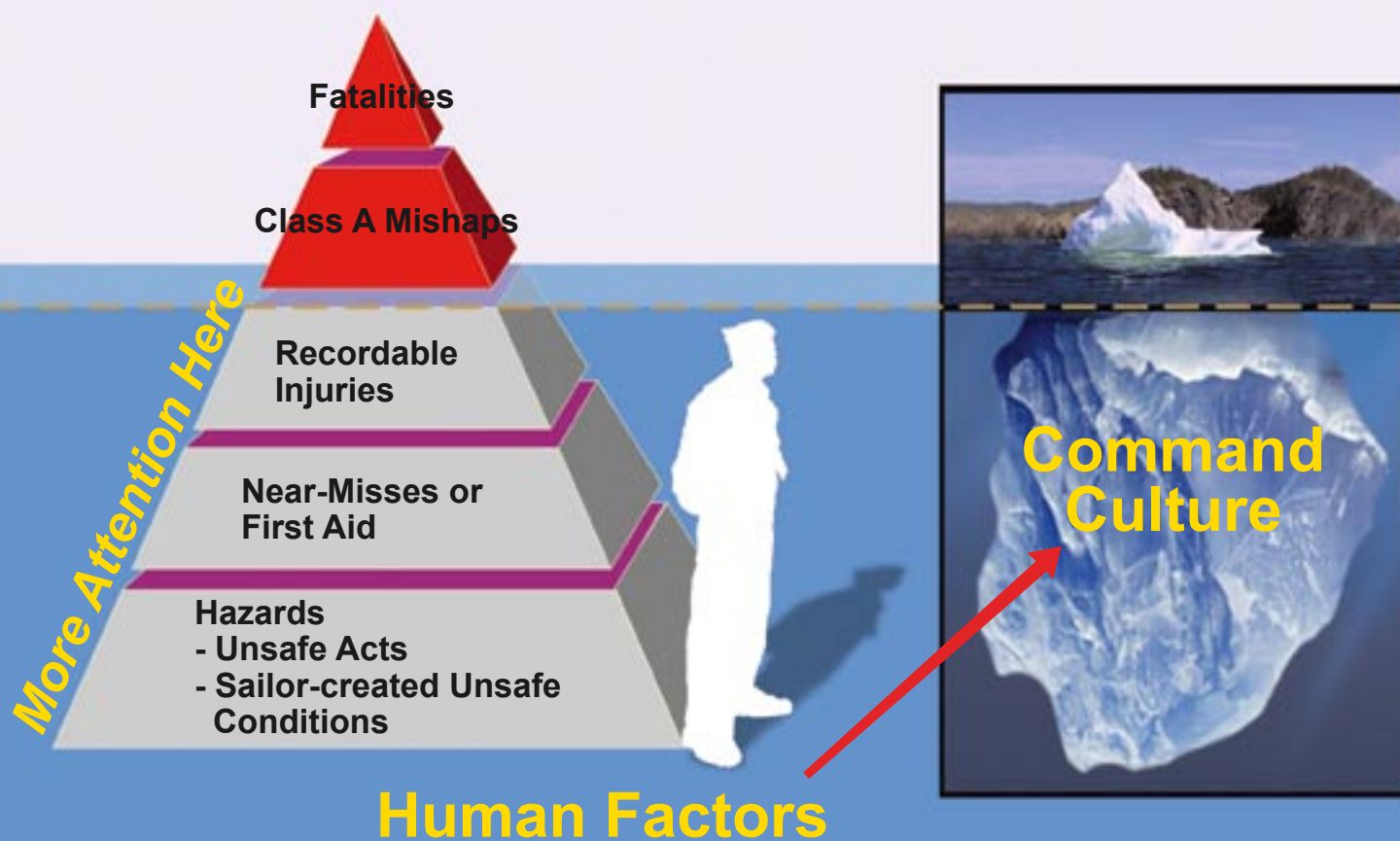
RADM Dick Brooks

Commander, Naval Safety Center

NAVYWIDE CHALLENGES

There Is Still Lots To Be Done

Leaders Focus on Culture



For more information about our mishap-reduction campaign, visit our website at www.safetycenter.navy.mil/mishapreduction

